Alberta

Traffic Collision Statistics

2005

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2005 Overview

- The number of **traffic fatalities increased 20.4%** over the past year from 387 fatalities in 2004 to 466 in 2005.
- The number of **traffic injuries increased 1.1%** over the past year from 24249 injuries in 2004 to 24504 in 2005.
- The number of **traffic collisions increased 10.4%** over the past year from 112553 collisions in 2004 to 124206 in 2005.
- **The highest number of fatal collisions** occurred in **July. The highest number of injury collisions** occurred in **January**.
- **Friday** was the most collision-prone day of the week.
- **The most collision-prone period of time was the afternoon rush-hour**.
- **Casualty rates** were highest for persons between the **ages of 15 and 24**.
- **Male drivers** between the **ages of 18 and 19** had the highest involvement rate of all drivers involved in casualty collisions.
- Following too closely, running off the road and left turn across path were the most frequently identified improper driver actions contributing to casualty collisions.
- **Fatal collisions** occurred most frequently in **rural areas**, whereas **injury and property damage collisions** occurred more frequently in **urban areas**.
- **29.7% of pedestrians** involved in **fatal collisions had consumed alcohol prior to the collision** compared to **13.6% of pedestrians in injury collisions**.
- **19.2%** of drivers involved in fatal collisions **had consumed alcohol** prior to the crash compared to **5.3%** of drivers in injury collisions.
- Collision involved restraint users had a much lower injury rate (10.7%) than those not using restraints (34.7%)

Preface

The purpose of this report is to provide an overview of the "who", "what", "when", "where", "why", and "how" of traffic collisions which occurred in Alberta during 2005. Although the report is general in nature, it pays particular attention to casualty collisions, that is, those collisions which result in death or injury. Legislation in Alberta requires that a traffic collision, which results in either death, injury or property damage to an apparent extent of $1000.00 or more, be reported immediately to an authorized peace officer. The officer completes a standardized collision report form which provides information on various aspects of the traffic collision. This report is based on the data collected from these report forms.

The collision report form is issued with standard instructions to every police service within Alberta, to be completed by the officer attending the scene of a motor vehicle collision or at a police station. Police priorities at the scene of a collision are to care for the injured, protect the motoring public and clear the roadway. Completion of the collision report form is a secondary, but necessary task.

After completion, the information on the collision report form is coded for input to computer files. The Alberta Collision Information System, which has been operational since 1978, undergoes several manual and computerized inspections each year in order to ensure maximum accuracy of the final data output. This collision information is used to make Alberta's roads safer for all road users. Due to continuing police investigation, some numbers presented in this report may be subject to revision. It should also be noted that not all percentage columns will total 100 due to rounding error.

This report was produced based on collisions reported to Alberta Infrastructure and Transportation by police, at the time of printing. The numbers presented in this report will not be updated. However, the patterns and trends detailed in this report represent an accurate description of Alberta's traffic collision picture.

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Glossary

Alcohol Impaired – In the judgement of the police officer, driving ability was impaired by alcohol consumption. Whether or not the subject was actually charged is not taken into consideration by the collision report form.

Casualty Collision – A vehicle collision which results in either a fatal or personal injury.

Drinking Driver – Refers to those drivers judged by the police officer as having been drinking prior to the collision or as being alcohol impaired at the time of the collision. Whether or not the driver was actually charged is not taken into consideration by the collision report form.

Fatality – A fatality is the death of a person that occurs as a result of a motor vehicle collision within 30 days of the collision.

Had Been Drinking – In the judgement of the police officer, the driver had recently consumed alcohol but his driving ability was not obviously impaired.

Major Injury – Persons with injuries or complaint of pain that went to the hospital and were subsequently admitted even if for observation only.

Minor Injury – Persons with injuries or complaint of pain that went to the hospital, were treated in emergency (or refused treatment) and SENT HOME without ever being admitted to the hospital. (Also includes people who indicated that they intended to seek medical treatment).

Motorcyclist – Refers to drivers and passengers of motorcycles.

Occupant Casualties – Refers to people who were injured or killed as a result of a vehicle collision and were identified as being either a vehicle driver or passenger.

Property Damage – A vehicle collision which resulted in property damage exceeding $1000.00.

Reportable Collision – A vehicle collision which resulted in death, injury or property damage greater than $1000.00.

Rural – Any area outside of what is defined as "**Urban**".

Urban – Any area within the corporate boundaries of a city, town, village or hamlet.

2005 Traffic Collision Summary

Introduction

During 2005, 124206 collisions were recorded on Alberta roadways. Property damage collisions (over $1000) represented 85.4% (106088) of this total while 14.3% (17726) were non-fatal injury collisions. Fatal collisions accounted for 0.3% (392) of the total reported collisions.

Five Year Trends

In terms of population, licensed drivers and registered vehicles the fatal collision and fatality rates increased from 2004.

The non-fatal injury collision rate, has decreased in 2005 in terms of registered vehicles and increased in terms of population and licensed drivers.

Property damage collision rates increased in 2005 in terms of population, licensed drivers and registered vehicles.

Provincial Comparisons

In order to get a picture of Alberta's traffic casualties in comparison to other provinces, rates rather than absolute numbers are utilized. In this instance casualty rates per billion vehicle kilometres travelled were examined.

Figures for 2005 provincial comparisons were not available at the time of printing; therefore, figures for 2004 were used. Based on this comparison of rates per billion vehicle kilometres travelled, of the thirteen provinces and territories, four had a higher fatality rate than Alberta in 2004. With regard to injury rate, in 2004, seven jurisdictions had a higher injury rate than Alberta.

Table 1.1

Alberta Traffic Collisions

2001 – 2005

Severity of Collisions	**2005**	**2004**	**2003**	**2002**	**2001**
Fatal Collisions	392	339	321	322	341
Non-Fatal Injury Collisions	17726	17248	18447	20152	19000
Property Damage Collisions	106088	94966	94589	95834	88050
Total Reportable Collisions	**124206**	**112553**	**113357**	**116308**	**107391**
Number Killed	466	387	385	372	404
Number Injured	24504	24249	26426	28989	27583
Total Number of Casualties	**24970**	**24636**	**26811**	**29361**	**27987**

Observations

In 2005, the overall number of collisions increased 10.4% when compared to 2004. In 2005, injury collisions increased by 2.8% and fatal crashes increased by 15.6%. The number of fatalities increased by 20.4% from 2004 to 2005, and the number of injuries increased by 1.1%. In terms of the past five years, overall collisions were lowest in 2001 and highest in 2005.

Table 1.2

Traffic Collision Rates

2001 – 2005

Severity of Collision	Rate Per 10,000 Population*					Rate Per 10,000 Licensed Drivers*					Rate Per 10,000 Registered Vehicles*				
	2005	**2004**	**2003**	**2002**	**2001****	**2005**	**2004**	**2003**	**2002**	**2001**	**2005**	**2004**	**2003**	**2002**	**2001**
Fatal Collisions	1.2	1.1	1.0	1.0	1.1	1.6	1.4	1.4	1.4	1.5	1.5	1.4	1.3	1.3	1.5
Number Killed	1.4	1.2	1.2	1.2	1.3	1.9	1.6	1.6	1.6	1.8	1.8	1.6	1.6	1.6	1.7
Non-Fatal Injury Collisions	54.4	53.9	58.5	64.7	62.0	72.6	72.2	78.0	86.3	83.2	68.2	69.7	76.4	84.4	81.5
Number Injured	75.2	75.7	83.8	93.1	90.0	100.3	101.5	111.8	124.2	120.7	94.3	98.0	109.5	121.5	118.3
Property Damage Collisions	325.7	296.6	299.9	307.8	287.4	434.4	397.6	400.2	410.5	385.4	408.1	383.7	391.8	401.6	377.6
Total Reportable Collisions	**381.4**	**351.5**	**359.4**	**373.5**	**350.5**	**508.6**	**471.2**	**479.6**	**498.1**	**470.0**	**477.8**	**454.7**	**469.5**	**487.4**	**460.5**

Observations

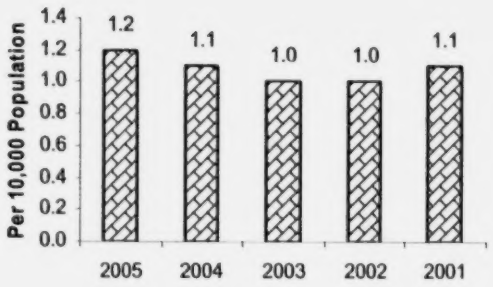
In terms of population, licensed drivers and registered vehicles the fatality rates have increased from 2004.

The rate for number injured, has decreased in 2005 in terms of population, licensed drivers and registered vehicles.

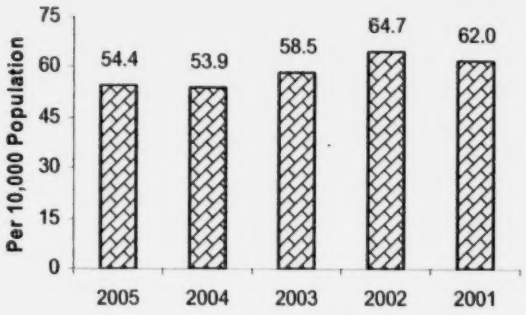
*Sources:
Population – Statistics Canada as of July 1, 2005
Licensed Drivers – Government Services – Registries, as of December 31, 2005
Registered Vehicles – Government Services – Registries, as of December 31, 2005
**Updated 2003, Source: Statistics Canada as of July 1, 2001

Figure 1

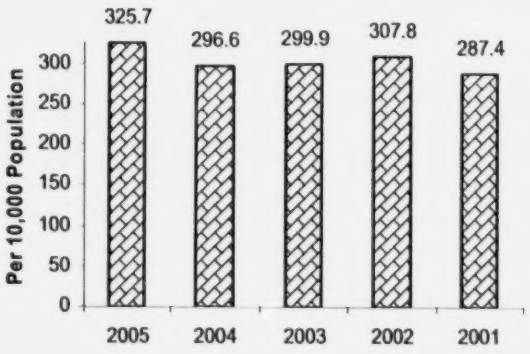
Fatal Collision Rates
Alberta 2001 - 2005



Injury Collision Rates
Alberta 2001 - 2005



Property Damage Collision Rates
Alberta 2001 - 2005



Overall Collision Rates
Alberta 2001 - 2005

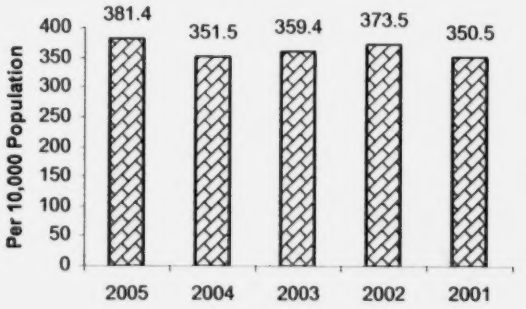


Table 1.3

Provincial Comparison of Casualty Rates
Per Billion Vehicle Kilometres Travelled*

2001-2004

	2004		2003		2002		2001	
	Fatalities	Injuries	Fatalities	Injuries	Fatalities	Injuries	Fatalities	Injuries
Canada	8.8	680.8	8.9	711.0	9.3	721.2	9.0	713.0
Alberta	9.9	621.5	9.8	671.8	10.1	783.6	10.0	682.4
British Columbia	12.4	842.4	12.9	902.5	12.4	776.6	11.7	838.5
Saskatchewan	11.0	647.1	12.1	618.0	12.3	652.7	13.0	547.5
Manitoba	9.5	890.8	8.5	795.9	10.8	948.9	8.3	799.3
Ontario	6.6	599.8	7.3	669.2	7.1	679.4	7.3	705.4
Quebec	9.0	778.0	8.4	754.3	9.9	749.1	8.8	707.5
New Brunswick	9.6	572.9	11.8	572.5	12.2	592.3	11.7	686.5
Nova Scotia	9.4	533.2	6.7	504.1	8.5	574.0	8.2	647.6
Prince Edward Island	22.6	759.5	12.0	753.3	14.3	789.8	12.2	896.0
Newfoundland	9.7	699.1	11.0	768.5	10.0	701.2	9.3	690.2
Yukon	9.4	397.4	14.1	468.3	25.3	572.6	10.9	836.7
Northwest Territories	9.6	485.2	8.2	471.4	8.4	643.2	7.5	512.8
Nunavut	33.7	2222.2	N/A	N/A	N/A	N/A	47.6	N/A

Observations

In order to get a picture of Alberta's traffic casualties in comparison to other provinces, rates rather than absolute numbers are utilized. In this instance casualty rates per billion vehicle kilometres travelled were examined.

Based on this comparison of rates per billion vehicle kilometres travelled, of the thirteen provinces and territories, four had a higher fatality rate than Alberta in 2004. With regard to injury rate, in 2004, seven jurisdictions had a higher injury rate than Alberta.

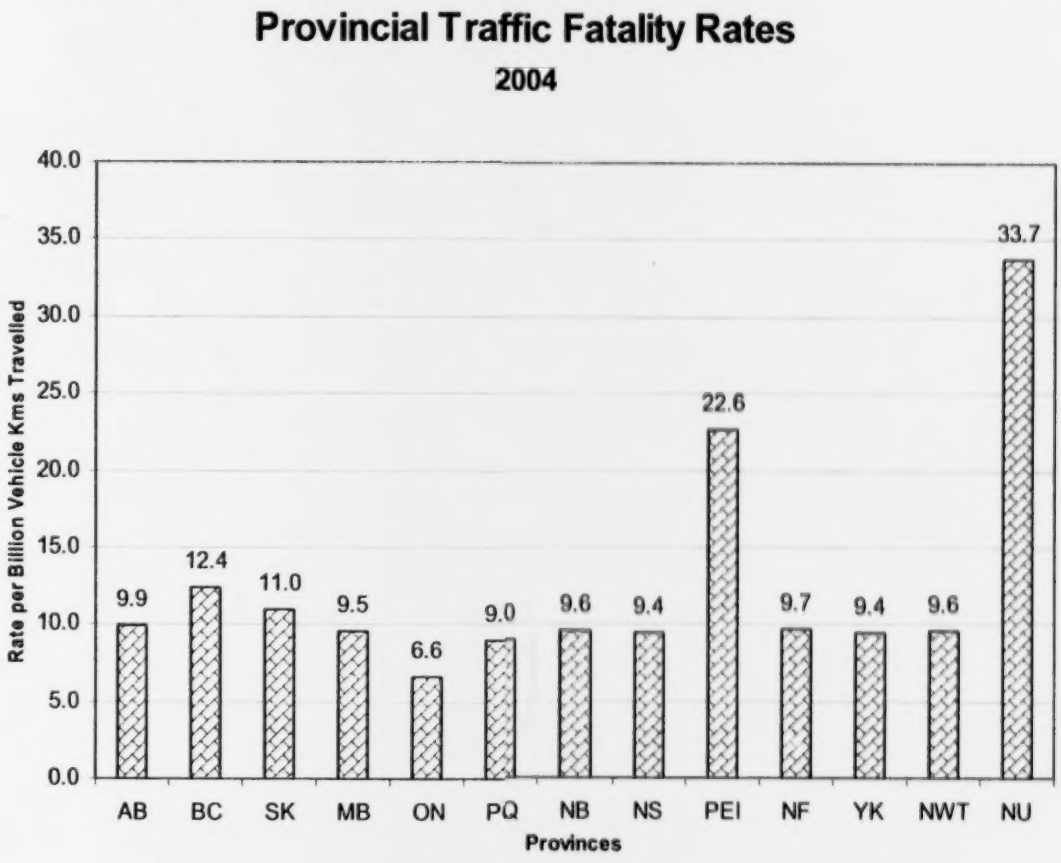
*Figures for 2005 were not available at time of printing.

Sources: Transport Canada Canadian Motor Vehicle Traffic Collision Statistics TP3322 and Statistics Canada, "Canadian Vehicle Survey", catalogue No. 53-223-XIE.

The Canadian Vehicle Survey (CVS) is a voluntary vehicle-based survey that provides annual estimates of road vehicle activity (Vehicle-kilometres and passenger-kilometres) of vehicles registered in Canada.

The in-scope vehicles for the CVS include all motor vehicles except motorcycles, off-road vehicles (e.g., snowmobiles, dune buggies, amphibious vehicles) and special equipment (e.g. cranes, street cleaners, snowplows and backhoes) registered in Canada anytime during the survey reference period that have not been scrapped or salvaged.

Figure 2


Provincial Traffic Fatality Rates
2004
Rate per Billion Vehicle Kms Travelled
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
9.9
12.4
11.0
9.5
6.6
9.0
9.6
9.4
22.6
9.7
9.4
9.6
33.7
AB
BC
SK
MB
ON
PQ
NB
NS
PEI
NF
YK
NWT
NU
Provinces

When the Collisions Occurred

Month

The month of January experienced more casualty collisions than other months. The highest number of property damage collisions was recorded during the month of December.

Day of Week

The daily distribution of collisions indicated that Friday was the most collision-prone day of the week.

Time

The afternoon rush hour period (3:00 p.m. – 6:59 p.m.) accounted for the highest proportion of collisions. The least collision-prone time period was the early morning (3:00 a.m. – 6:59 a.m.).

Holidays

The Family Day Long Weekend and the Victoria Day Long Weekend recorded the highest number of individuals killed. The Labour Day Long Weekend recorded the highest number of injuries. The Remembrance Day Long Weekend recorded the highest total number of collisions.

Table 2.1

Collision Occurrence by Month

2005

Month	Fatal Collisions		Non-Fatal Injury Collisions		Property Damage Collisions		Total Collisions	
	N	%	N	%	N	%	N	%
January	28	7.1	1703	9.6	11739	11.1	13470	10.8
February	25	6.4	1146	6.5	8008	7.5	9179	7.4
March	19	4.8	1329	7.5	8274	7.8	9622	7.7
April	23	5.9	1246	7.0	6541	6.2	7810	6.3
May	26	6.6	1445	8.2	7167	6.8	8638	7.0
June	34	8.7	1473	8.3	8477	8.0	9984	8.0
July	45	11.5	1510	8.5	7990	7.5	9545	7.7
August	42	10.7	1539	8.7	7735	7.3	9316	7.5
September	39	9.9	1552	8.8	7885	7.4	9476	7.6
October	35	8.9	1506	8.5	8671	8.2	10212	8.2
November	34	8.7	1599	9.0	10988	10.4	12621	10.2
December	42	10.7	1675	9.4	12369	11.7	14086	11.3
Unspecified	--	--	3	0.0	244	0.2	247	0.2
Total Number of Collisions	**392**	**100.0**	**17726**	**100.0**	**106088**	**100.0**	**124206**	**100.0**

Observations

The month of July experienced more fatal crashes than other months. The highest number of reported injury collisions was in January and the highest number of property damage collisions was in the month of December.

Table 2.2

Collision Occurrence by Day of Week

2005

Day of Week	Fatal Collisions N	Fatal Collisions %	Non-Fatal Injury Collisions N	Non-Fatal Injury Collisions %	Property Damage Collisions N	Property Damage Collisions %	Total Collisions N	Total Collisions %
Monday	54	13.8	2556	14.4	15055	14.2	17665	14.2
Tuesday	47	12.0	2625	14.8	15449	14.6	18121	14.6
Wednesday	57	14.5	2648	14.9	15389	14.5	18094	14.6
Thursday	66	16.8	2690	15.2	15790	14.9	18546	14.9
Friday	60	15.3	2972	16.8	18063	17.0	21095	17.0
Saturday	64	16.3	2309	13.0	14780	13.9	17153	13.8
Sunday	44	11.2	1920	10.8	11257	10.6	13221	10.6
Unspecified	--	--	6	0.0	305	0.3	311	0.3
Total Number of Collisions	**392**	**100.0**	**17726**	**100.0**	**106088**	**100.0**	**124206**	**100.0**

Observations

The daily distribution of collisions indicated that overall Friday was the most collision-prone day of the week.

Table 2.3

Collision Occurrence by Time Period

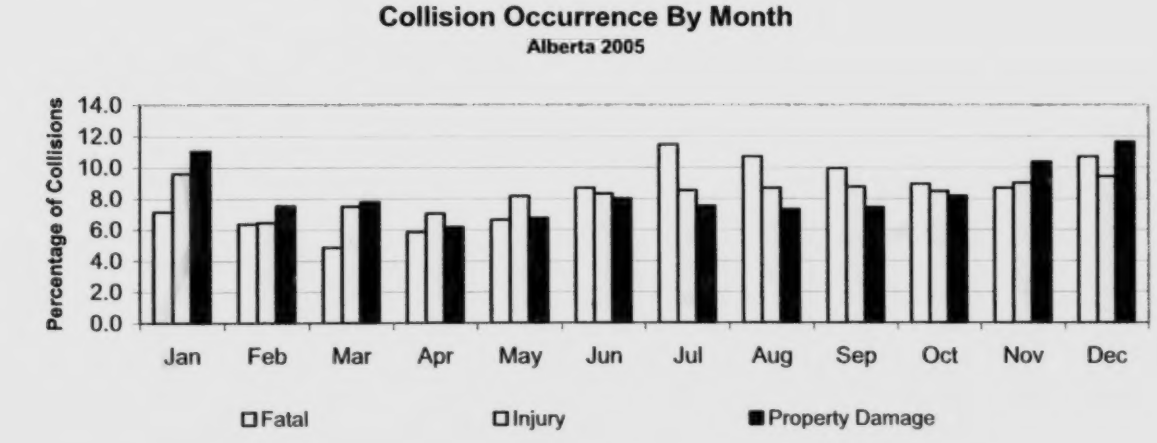
2005

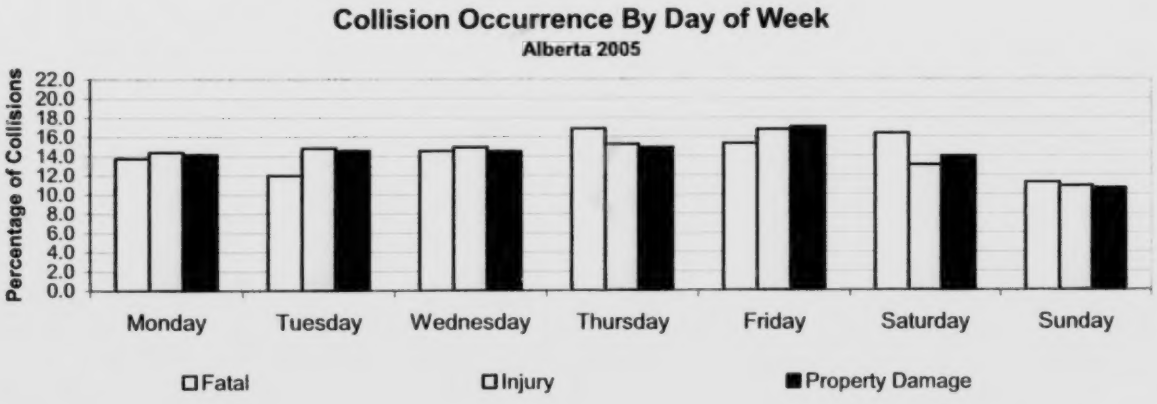
Time Period	Fatal Collisions N	%	Non-Fatal Injury Collisions N	%	Property Damage Collisions N	%	Total Collisions N	%
11:00 p.m. - 2:59 a.m.	67	17.1	1305	7.4	8058	7.6	9430	7.6
3:00 a.m. - 6:59 a.m.	42	10.7	896	5.1	5721	5.4	6659	5.4
7:00 a.m. - 10:59 a.m.	46	11.7	3088	17.4	18369	17.3	21503	17.3
11:00 a.m. - 2:59 p.m.	76	19.4	4058	22.9	24418	23.0	28552	23.0
3:00 p.m. - 6:59 p.m.	68	17.3	5611	31.7	30154	28.4	35833	28.8
7:00 p.m. - 10:59 p.m.	79	20.2	2607	14.7	17180	16.2	19866	16.0
Unspecified	14	3.6	161	0.9	2188	2.1	2363	1.9
Total Number of Collisions	**392**	**100.0**	**17726**	**100.0**	**106088**	**100.0**	**124206**	**100.0**

Observations

The afternoon rush hour period (3:00 p.m. – 6:59 p.m.) accounted for the largest percentage (28.8%) of collisions occurring in a 24 hour period. The least collision-prone time period was the early morning (3:00 a.m. – 6:59 a.m.).

Figure 3


Collision Occurrence By Month
Alberta 2005
Percentage of Collisions
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Fatal
Injury
Property Damage


Collision Occurrence By Day of Week
Alberta 2005
Percentage of Collisions
22.0
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
Fatal
Injury
Property Damage

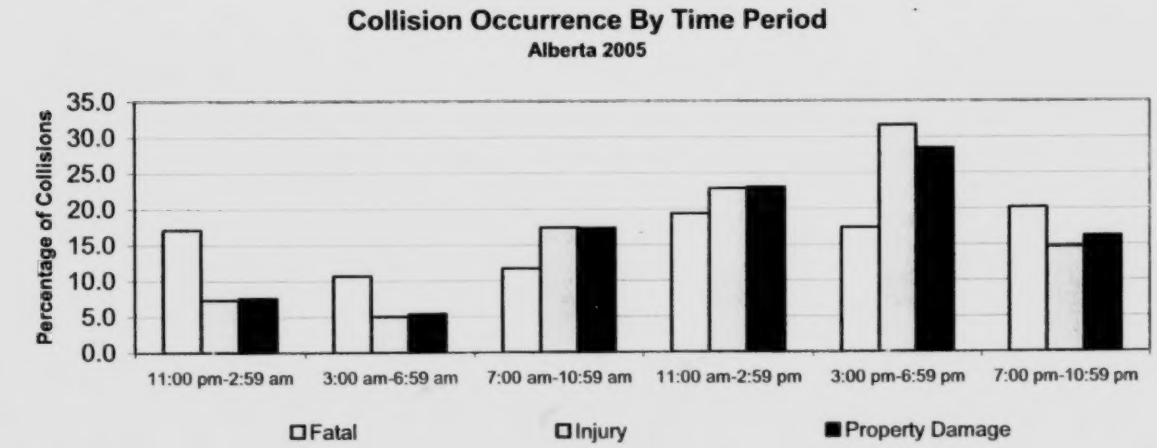

Collision Occurrence By Time Period
Alberta 2005
Percentage of Collisions
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
11:00 pm-2:59 am
3:00 am-6:59 am
7:00 am-10:59 am
11:00 am-2:59 pm
3:00 pm-6:59 pm
7:00 pm-10:59 pm
Fatal
Injury
Property Damage

Table 2.4

Collisions During 2005 Holidays

Holidays	Number Killed N	Number Injured N	Total Collisions* N
New Year's Day (January 1)	2	59	423
Family Day Long Weekend (February 18-21)	10	223	1161
Easter Long Weekend (Mar 24-28)	5	276	1295
Victoria Day Long Weekend (May 20-23)	10	276	1021
Canada Day (June 30 -July 3)	8	266	1170
August Long Weekend (July 29 - August 1)	5	241	1107
Labour Day Long Weekend (September 2-5)	6	304	977
Thanksgiving Long Weekend (October 7-10)	4	208	1133
Remembrance Day (November 10-13)	4	283	1498
Christmas Season (December 23-26)	9	245	1242
TOTAL	**63**	**2381**	**11027**

Observations

The Family Day Long Weekend and the Victoria Day Long Weekend recorded the highest number of individuals killed. The Labour Day Long Weekend recorded the highest number of injuries. The Remembrance Day Long Weekend recorded the highest total number of collisions.

*Total collisions includes fatal, injury and property damage collisions.

Note: Comparisons should be done with caution. The number of days for each holiday period within the year may vary. From year to year, holiday periods may also vary in length.

Victims

Road User Class

The majority of traffic victims were drivers and passengers of vehicles. Pedestrians and motorcyclists accounted for 5.2% and 3.0% of the total casualties, respectively.

Age of Casualties

Casualty rates per 10,000 population were highest for persons between the ages of 15 and 24. The lowest casualty rates were recorded for children 14 and under.

Table 3.1

Injuries and Fatalities by Road User Class

2005

Road User Class	Persons Killed N	Persons Killed %	Persons Injured N	Persons Injured %	Total Casualties N	Total Casualties %
Drivers	258	55.4	14792	60.4	15050	60.3
Passengers	110	23.6	6697	27.3	6807	27.3
Pedestrians	49	10.5	1247	5.1	1296	5.2
Motorcyclists	21	4.5	734	3.0	755	3.0
Bicyclists	5	1.1	631	2.6	636	2.5
Other	13	2.8	289	1.2	302	1.2
Unspecified	10	2.1	114	0.5	124	0.5
Total Casualties	**466**	**100.0**	**24504**	**100.0**	**24970**	**100.0**

Observations

The majority of traffic victims were drivers and passengers of vehicles. Pedestrians and motorcyclists accounted for 5.2% and 3.0% of the total casualties, respectively.

Table 3.2

Age of Casualties

2005

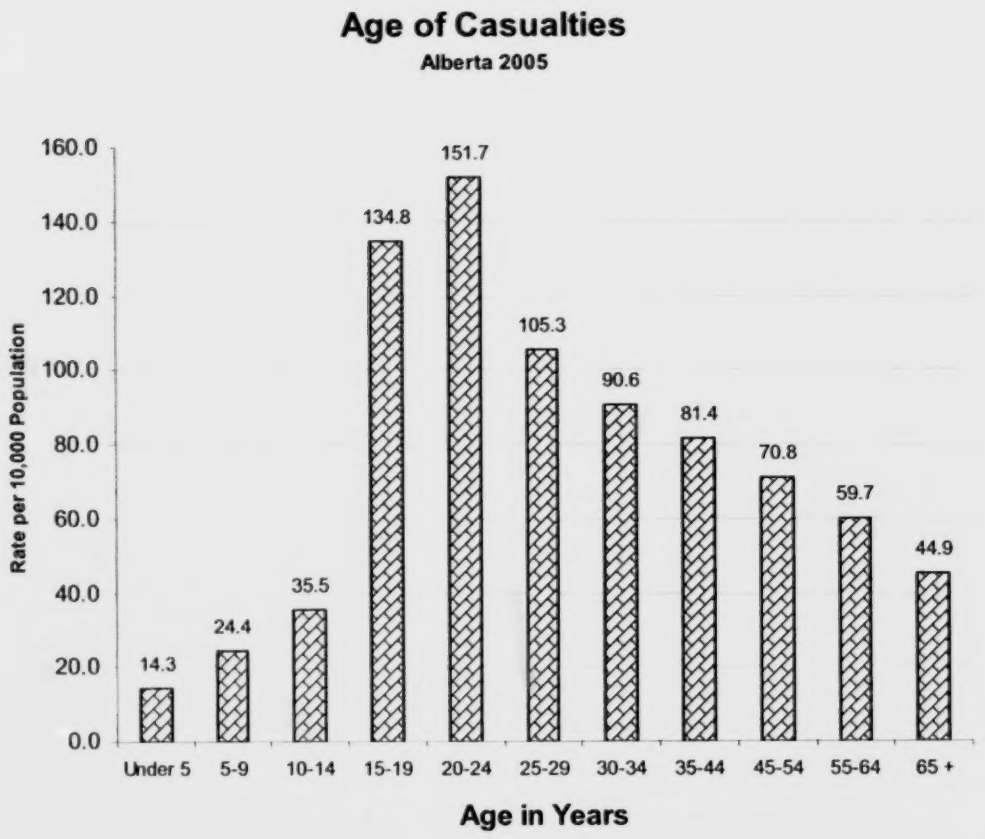
Age in Years	Persons Killed N	Persons Killed %	Persons Injured N	Persons Injured %	Total Casualties N	Total Casualties %	Casualty Rate Per 10,000 Population*
Under 5	5	1.1	279	1.1	284	1.1	14.3
5-9	3	0.6	496	2.0	499	2.0	24.4
10-14	10	2.1	774	3.2	784	3.1	35.5
15-19	50	10.7	3117	12.7	3167	12.7	134.8
20-24	70	15.0	3753	15.3	3823	15.3	151.7
25-29	48	10.3	2605	10.6	2653	10.6	105.3
30-34	40	8.6	2149	8.8	2189	8.8	90.6
35-44	67	14.4	4134	16.9	4201	16.8	81.4
45-54	54	11.6	3418	13.9	3472	13.9	70.8
55-64	53	11.4	1771	7.2	1824	7.3	59.7
65 and over	66	14.2	1464	6.0	1530	6.1	44.9
Unspecified	--	--	544	2.2	544	2.2	
Total Casualties	**466**	**100.0**	**24504**	**100.0**	**24970**	**100.0**	

Observations

Casualty rates per 10,000 population were highest for persons between the ages of 15 and 24. The lowest casualty rates were recorded for children 14 years of age and younger.

*Based on estimates of the Alberta population by age groups and sex, July 1, 2005, Statistics Canada

Figure 4


Age of Casualties
Alberta 2005
Rate per 10,000 Population
160.0
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
14.3
24.4
35.5
134.8
151.7
105.3
90.6
81.4
70.8
59.7
44.9
Under 5
5-9
10-14
15-19
20-24
25-29
30-34
35-44
45-54
55-64
65 +
Age in Years

Drivers

Age and Sex of Drivers

Collision rates per 1000 licensed drivers indicate that males 18 to 19 years old were more likely to be involved in a casualty collision than any other age group. The next age group most likely to be involved in casualty collisions were males 20 to 24 years old.

Driver Actions

Following too closely (26.1%), running off the road (14.7%) and left turn across path (12.6%) were the most frequently identified improper driver actions contributing to casualty collisions.

Table 4.1

Age and Sex of Drivers Involved in Casualty Collisions:

Per 1,000 Licensed Drivers

2005

	Male			Female			Total*		
Age of Driver	**N**	**%**	**Rate Per 1000** Licensed Drivers**	**N**	**%**	**Rate Per 1000** Licensed Drivers**	**N**	**%**	**Rate Per 1000** Licensed Drivers**
Under 16	180	0.6	12.7	64	0.2	5.8	245	0.8	9.7
16-17	688	2.1	22.4	437	1.4	16.4	1127	3.5	19.7
18-19	1300	4.0	32.2	729	2.3	20.5	2029	6.3	26.7
20-24	3037	9.4	24.7	1837	5.7	16.7	4879	15.1	20.9
25-34	4186	13.0	16.3	2693	8.3	11.5	6883	21.3	14.1
35-44	3804	11.8	14.5	2564	7.9	10.4	6374	19.7	12.5
45-54	3280	10.2	12.6	2010	6.2	8.4	5292	16.4	10.6
55-64	1791	5.5	11.2	996	3.1	7.0	2789	8.6	9.2
65 and over	1311	4.1	9.5	666	2.1	5.9	1979	6.1	7.9
Unspecified	183	0.6		64	0.2		680	2.1	
Total Number of Drivers	**19760**	**61.2**		**12060**	**37.4**		**32277**	**100.0**	

Observations

Collision rates per 1000 licensed drivers indicated that males 18 to 19 years old were more likely to be involved in a casualty collision than any other age group. The next age group most likely to be involved in casualty collisions was males 20 to 24 years old.

*Total includes drivers whose sex was not specified on the collision report form. Includes bicyclists.

**Source: Government Services – Registries. Operator Statistics, December 31, 2005

Figure 5

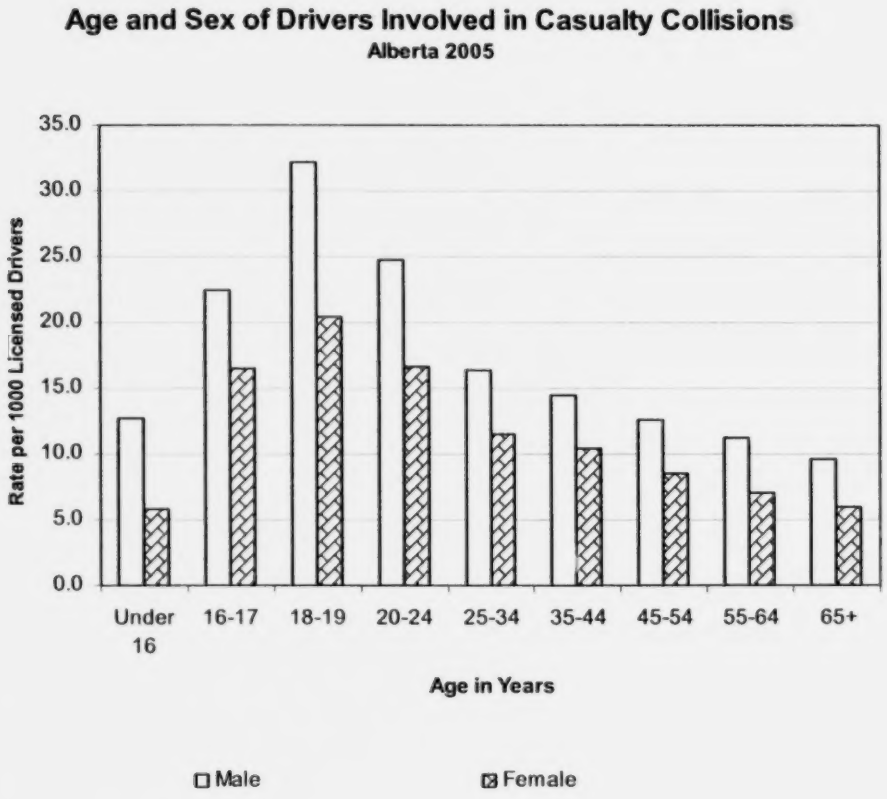

Age and Sex of Drivers Involved in Casualty Collisions
Alberta 2005
Rate per 1000 Licensed Drivers
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
Under 16
16-17
18-19
20-24
25-34
35-44
45-54
55-64
65+
Age in Years
Male
Female

Table 4.2

Improper Actions of Drivers Involved in Casualty Collisions*

2005

Improper Actions	Drivers in Fatal Collisions N	%	Drivers in Non-Fatal Injury Collisions N	%	Total Drivers in Casualty Collisions N	%
Followed Too Closely	8	2.5	3317	26.7	3325	26.1
Ran Off Road	133	41.7	1740	14.0	1873	14.7
Left Turn Across Path	21	6.6	1587	12.8	1608	12.6
Stop Sign Violation	35	11.0	1026	8.3	1061	8.3
Disobey Traffic Signal	11	3.4	874	7.0	885	7.0
Failed to Yield Right of Way to Pedestrian	5	1.6	440	3.5	445	3.5
Left of Centre	62	19.4	297	2.4	359	2.8
Improper Lane Change	4	1.3	340	2.7	344	2.7
Improper Turn	1	0.3	282	2.3	283	2.2
Backed Unsafely	--	--	279	2.2	279	2.2
Yield Sign Violation	2	0.6	252	2.0	254	2.0
Failed to Yield Right of Way - Uncontrolled Intersection	4	1.3	228	1.8	232	1.8
Improper Passing	10	3.1	125	1.0	135	1.1
Other	23	7.2	1623	13.1	1646	12.9
Total Number of Drivers	**319**	**100.0**	**12410**	**100.0**	**12729**	**100.0**

Observations

Following too closely (26.1%), running off the road (14.7%) and left turn across path (12.6%) were the most frequently identified improper driver actions contributing to casualty collisions.

*Based on those cases where driver actions were specified on the collision report form. Includes bicyclists.

Note: There was a total of 26061 drivers involved in casualty collisions for which a driver action was specified on the collision report form. 13331 were indicated as driving properly at the time of the collision.

Vehicles

Types of Vehicles

Passenger cars (49.9%), pick-up trucks/vans (19.9%) and minivans/MPV (19.3%) were the vehicles most frequently involved in total casualty collisions.

Vehicle Factors

Less than 1.0% of vehicles involved in casualty collisions were identified as having a vehicle defect. The most common defect was defective brakes.

Point of Impact

The most common point of impact in casualty collisions involved the front of the vehicle. Approximately 42.2% of the impacts involved the centre front.

Table 5.1

Types of Vehicles Involved in Casualty Collisions*

2005

Type of Vehicle	Vehicles in Fatal Collisions N	%	Vehicles in Non-Fatal Injury Collisions N	%	Total Vehicles in Casualty Collisions N	%
Passenger Car	214	34.1	16186	50.2	16400	49.9
Pick-up Truck/Van	176	28.1	6354	19.7	6530	19.9
Mini-Van/MPV	92	14.7	6246	19.4	6338	19.3
Truck 4500 kg+	44	7.0	1065	3.3	1109	3.4
Motorcycle	22	3.5	718	2.2	740	2.3
Tractor-Trailer	45	7.2	601	1.9	646	2.0
Bicycle	5	0.8	632	2.0	637	1.9
Off-Highway Vehicle	11	1.8	123	0.4	134	0.4
Transit Bus	2	0.3	94	0.3	96	0.3
School Bus	1	0.2	73	0.2	74	0.2
Emergency Vehicle	4	0.6	34	0.1	38	0.1
Other Bus	3	0.5	32	0.1	35	0.1
Construction Equipment	2	0.3	24	0.1	26	0.1
Motorized Snow Vehicle	1	0.2	21	0.1	22	0.1
Motorhome	4	0.6	12	0.0	16	0.0
Farm Equipment	1	0.2	12	0.0	13	0.0
Intercity Bus	--	--	10	0.0	10	0.0
Moped	--	--	4	0.0	4	0.0
Other	--	--	3	0.0	3	0.0
Total Number of Vehicles	**627**	**100.0**	**32244**	**100.0**	**32871**	**100.0**

Observations

Passenger cars, pick-up trucks/vans and mini-van/MPV were the vehicles most frequently involved in total casualty collisions. Overall, bicycles represented 1.9% and motorcycles 2.3% of the vehicles involved in casualty collisions. Tractor-Trailers were 2.0% of total vehicles in casualty crashes, but 7.2% of vehicles in fatal crashes.

*Based on those cases where type of vehicle was specified on the collision report form.

Table 5.2

Vehicle Factors Involved in Casualty Collisions*

2005

Vehicle Factors	Vehicles in Fatal Collisions N	%	Vehicles in Non-Fatal Injury Collisions N	%	Total Vehicles in Casualty Collisions N	%
No Apparent Defect	442	98.7	24874	99.2	25316	99.2
Defective Brakes	2	0.4	50	0.2	52	0.2
Tires Failed	--	--	37	0.1	37	0.1
Lighting Defect	2	0.4	20	0.1	22	0.1
Improper Load/Shift	1	0.2	9	0.0	10	0.0
Other	1	0.2	74	0.3	75	0.3
Total Number of Vehicles	**448**	**100.0**	**25064**	**100.0**	**25512**	**100.0**

Observations

Less than 1.0% of vehicles involved in casualty collisions were identified as having a vehicle defect. The most common was defective brakes.

*Based on those cases where a vehicle factor was specified on the collision report form. This information does not indicate whether or not a mechanical inspection of the collision-involved vehicle was conducted.

Table 5.3

Point of Impact on Vehicles Involved in Casualty Collisions*

2005

Point of Impact	Vehicles in Fatal Collisions N	%	Vehicles in Non-Fatal Injury Collisions N	%	Total Vehicles in Casualty Collisions N	%
Centre Front	273	45.5	12879	42.1	13152	42.2
Centre Rear	26	4.3	7143	23.4	7169	23.0
Left Front	55	9.2	2289	7.5	2344	7.5
Right Front	26	4.3	2249	7.4	2275	7.3
Rollover	111	18.5	1864	6.1	1975	6.3
Right Side	33	5.5	1134	3.7	1167	3.7
Left Side	36	6.0	1123	3.7	1159	3.7
Right Rear	10	1.7	765	2.5	775	2.5
Left Rear	15	2.5	717	2.3	732	2.3
Attachment	7	1.2	249	0.8	256	0.8
Undercarriage	7	1.2	99	0.3	106	0.3
Top	1	0.2	71	0.2	72	0.2
Total Number of Vehicles	**600**	**100.0**	**30582**	**100.0**	**31182**	**100.0**

Observations

The most common point of impact in casualty collisions involved the front of the vehicle. 42.2% of the impacts involved the centre front, while 23.0% of the impacts involved the centre rear.

*Based on those cases where point of impact was specified on the collision report form.

Environment

Location

The majority of fatal crashes (71.4%) occurred in rural areas, whereas the majority of injury (77.3%) and property damage (79.5%) crashes occurred in urban areas.

Surface Conditions

The majority (62.7%) of all casualty collisions occurred when surface conditions were dry. Slush, snow or ice was involved in 12.8% of fatal collisions and 16.8% of non-fatal injury collisions.

Table 6.1

Location of Collisions

2005

Location	Fatal Collisions N	%	Non-Fatal Injury Collisions N	%	Property Damage Collisions N	%	Total Collisions N	%
Urban	112	28.6	13700	77.3	84307	79.5	98119	79.0
Rural	280	71.4	4026	22.7	21781	20.5	26087	21.0
Total Number of Collisions	**392**	**100.0**	**17726**	**100.0**	**106088**	**100.0**	**124206**	**100.0**

Observations

Collisions which occurred in rural areas accounted for 71.4% of all fatal crashes. Collisions occurring in urban areas resulted in the highest proportion of non-fatal injury collisions (77.3%) and property damage crashes (79.5%).

Table 6.2

Casualty Collision Occurrence by Surface Condition

2005

Surface Condition	Fatal Collisions N	Fatal Collisions %	Non-Fatal Injury Collisions N	Non-Fatal Injury Collisions %	Total Casualty Collisions N	Total Casualty Collisions %
Dry	287	73.2	11071	62.5	11358	62.7
Slush/Snow/Ice	50	12.8	2974	16.8	3024	16.7
Wet	32	8.2	1568	8.8	1600	8.8
Loose Surface Material	12	3.1	332	1.9	344	1.9
Muddy	1	0.3	41	0.2	42	0.2
Other	4	1.0	86	0.5	90	0.5
Unspecified	6	1.5	1654	9.3	1660	9.2
Total Number of Collisions	**392**	**100.0**	**17726**	**100.0**	**18118**	**100.0**

Observations

The majority (62.7%) of casualty collisions occurred when surface conditions were dry. Slush, snow or ice was involved in 12.8% of fatal collisions and 16.8% of non-fatal injury collisions.

Special Types of Vehicles

Motorcycles

- Based on motorcycle registrations, the involvement rate of motorcycles in fatal collisions has decreased and in injury collisions has remained the same in 2005.
- The majority of motorcycle casualty collisions involved male drivers. Motorcycle drivers under the age of 25 had the highest involvement rate per 1000 licensed drivers. In particular, 16-17 year old motorcycle drivers had an involvement rate per 1000 licensed drivers of 95.4, a rate almost five times greater than that of the 20-24 year old motorcycle drivers.
- Compared to drivers involved in total casualty collisions, motorcycle drivers were more likely to run off the road or pass improperly. However, motorcycle drivers were less likely to follow too closely, make an unsafe left turn or commit a stop sign violation.
- Compared to drivers involved in all types of vehicle casualty collisions, motorcycle drivers were more likely to have consumed alcohol before the crash.
- Vehicle factors were identified for 2.0% of motorcycles involved in casualty collisions compared to 0.8% for all types of vehicles involved in casualty collisions.
- The majority of casualty collisions involving motorcycles occurred on dry roads.

Table 7.1

Motorcycles Involved in Casualty Collisions

2001-2005

Number of Motorcycles	**2005**	**2004**	**2003**	**2002**	**2001**
Fatal	22	26	13	25	21
Non-Fatal Injury	718	661	616	558	629
Total Number of Motorcycles Involved in Casualty Collisions	**740**	**687**	**629**	**583**	**650**
Casualties*					
Number Killed	21	25	13	24	21
Number Injured	771	715	666	620	701
Total Casualties in Collisions Involving Motorcycles	**792**	**740**	**679**	**644**	**722**
Number of Motorcycles Involved in Casualty Collisions Per 10,000 Registered Motorcycles**					
Fatal Collisions	3.4	4.4	2.4	4.8	4.2
Non-Fatal Injury Collisions	110.9	110.9	111.5	106.2	126.9

Observations

Based on motorcycle registrations in 2005, the involvement rate of motorcycles in fatal collisions has decreased and in injury collisions has remained the same.

*This refers to the total number of people killed and injured in collisions in which a motorcycle was involved. It does not refer to the number of motorcyclists killed and injured.

** Source: Based on vehicle registration statistics, Government Services – Registries, December 31, 2005.

Figure 6

Number of Motorcycles Involved in Fatal Collisions
Alberta 2001 - 2005
Rate per 10,000 Registered Motorcycles
0
1
2
3
4
5
6
7
8
3.4
4.4
2.4
4.8
4.2
2005
2004
2003
2002
2001

Table 7.2

Age and Sex of Motorcycle Drivers Involved in Casualty Collisions

2005

Age of Motorcycle Driver	Male N	Male %	Female N	Female %	Total* N	Total* %	Rate Per 1,000 Licensed Motorcycle Drivers**
Under 16	5	0.7	1	0.1	6	0.8	
16-17	20	2.7	3	0.4	23	3.1	95.4
18-19	55	7.5	4	0.5	59	8.0	54.1
20-24	164	22.3	9	1.2	175	23.7	19.3
25-34	150	20.4	11	1.5	161	21.8	4.8
35-44	105	14.2	11	1.5	117	15.9	2.1
45-54	123	16.7	12	1.6	137	18.6	1.9
55-64	32	4.3	6	0.8	38	5.2	1.2
65 and over	16	2.2	1	0.1	17	2.3	1.4
Unspecified	1	0.1	--	--	4	0.5	
Total Number of Motorcycle Drivers	**671**	**91.0**	**58**	**7.9**	**737**	**100.0**	

Observations

The majority of motorcycle casualty collisions involved male drivers. Based on involvement per 1,000 licensed operators, motorcycle drivers under the age of 25 were most likely to be involved in collisions. In particular, 16-17 year old motorcycle drivers had the highest involvement rate per 1,000 licensed motorcyclists. These age and sex comparisons are limited due to the lack of driving exposure data. That is, in order to make valid age comparisons, it is important to take into account the number of kilometers driven annually by each age and sex group of motorcycle operators.

Note: In Alberta, Class 6 (motorcycle) licenses are not issued to operators under 16 years of age.

*Total includes drivers whose sex was not specified on the collision report form.

**Source: Government Services – Registries. Operator Statistics, December 31, 2005.

Table 7.3

Improper Actions of Motorcycle Drivers Involved in Casualty Collisions*

2005

Improper Actions of Motorcycle Driver	N	%	Driver Actions in Total Casualty Collisions (All Vehicle Types) %
Ran Off Road	94	35.5	14.7
Followed Too Closely	31	11.7	26.1
Improper Passing	14	5.3	1.1
Left of Centre	13	4.9	2.8
Improper Lane Change	11	4.2	2.7
Left Turn Across Path	10	3.8	12.6
Disobey Traffic Signal	7	2.6	7.0
Failed to Yield Right of Way - Uncontrolled Intersection	6	2.3	1.8
Stop Sign Violation	5	1.9	8.3
Improper Turn	4	1.5	2.2
Yield Sign Violation	1	0.4	2.0
Failed to Yield Right of Way to Pedestrian	1	0.4	3.5
Other	68	25.7	12.9
Total Number of Motorcycle Drivers	**265**	**100.0**	

Observations

Compared to drivers involved in total casualty collisions, motorcycle drivers were more likely to run off the road or pass improperly. However, motorcycle drivers were less likely to follow too closely, make an unsafe left turn or commit a stop sign violation.

* Based on those cases where driver actions were specified on the collision report form.

Note: There was a total of 573 motorcycle drivers involved in casualty collisions for which a driver action was specified on the collision report form. 308 were indicated as driving properly at the time of the collision.

Table 7.4

Condition of Motorcycle Drivers Involved in Casualty Collisions*

2005

Condition of Motorcycle Driver	N	%	Driver Condition in Total Casualty Collisions (All Vehicle Types) %
Normal	578	92.9	92.5
Had Been Drinking	21	3.4	2.8
Alcohol Impaired	22	3.5	2.8
Total Alcohol Involvement	**43**	**6.9**	**5.6**
Other	1	0.2	2.0
Total Number of Motorcycle Drivers	**622**	**100.0**	

Observations

The motorcycle driver's condition was a contributory factor for 7.1% of the involved motorcycle drivers. Compared to drivers involved in total casualty collisions, motorcycle drivers were more likely to have consumed alcohol prior to the crash.

*Based on those cases where driver condition was specified on the collision report form.

Table 7.5

Motorcycle Vehicle Factors in Casualty Collisions*

2005

Vehicle Factors	N	%	Vehicle Factors in Total Casualty Collisions (All Vehicle Types) %
No Apparent Defect	625	98.0	99.2
Tires Failed	3	0.5	0.1
Lighting Defect	3	0.5	0.1
Defective Brakes	1	0.2	0.2
Other	6	0.9	0.3
Total Number of Motorcycles	**638**	**100.0**	

Observations

Vehicle factors were identified for 2.0% of the motorcycles involved in casualty collisions, compared to 0.8% for all types of vehicles involved in casualty collisions.

*Based on those cases where a vehicle factor was specified on the collision report form. This does not indicate that a mechanical inspection of the collision-involved motorcycle was conducted.

Table 7.6

Casualty Collisions Involving Motorcycles:

Month of Occurrence

2005

Month	N	%
January	1	0.1
February	2	0.3
March	19	2.7
April	74	10.3
May	112	15.6
June	90	12.6
July	142	19.8
August	110	15.4
September	87	12.2
October	59	8.2
November	16	2.2
December	4	0.6
Total Number of Collisions	**716**	**100.0**

Observations

The months of May, July and August recorded the highest proportion of casualty crashes involving motorcycles.

Table 7.7

Casualty Collisions Involving Motorcycles:

Road Surface Condition

2005

Road Surface Condition	N	%
Dry	615	85.9
Loose Surface Material	38	5.3
Wet	28	3.9
Slush/Snow/Ice	3	0.4
Muddy	3	0.4
Other	1	0.1
Unspecified	28	3.9
Total Number of Collisions	**716**	**100.0**

Observations

The majority of casualty collisions involving motorcycles occurred on dry roads. Loose material on the road surface was involved in 5.3% of motorcycle casualty crashes. Wet roads were the scene of 3.9% of motorcycle casualty collisions.

Special Types of Vehicles

Truck Tractors

- In 2005, there were 58 persons killed and 802 injured in collisions involving truck tractors. This represents a decrease in fatalities but an increase in injuries from 2004.
- Compared to drivers of other vehicles, truck tractor drivers were more likely to run off the road or make an improper lane change. However, operators of truck tractors were less likely than other vehicle operators to follow too closely, make an unsafe left turn, or disobey a traffic signal.
- Truck tractor drivers were less likely to consume alcohol before the crash than were drivers in total casualty collisions.
- Vehicle factors were more likely to be present in truck tractor casualty collisions than in total casualty collisions.
- The occurrence of casualty collisions involving truck tractors was highest in the month of January.

Table 7.8

Truck Tractors Involved in Casualty Collisions

2001-2005

Number of Truck Tractors	2005	2004	2003	2002	2001
Fatal	45	59	58	43	43
Non-Fatal Injury	601	574	566	505	507
Total Number of Truck Tractors Involved in Casualty Collisions	**646**	**633**	**624**	**548**	**550**
Casualties*					
Number Killed	58	69	76	49	52
Number Injured	802	753	782	744	686
Total Casualties in Collisions Involving Truck Tractors	**860**	**822**	**858**	**793**	**738**

Observations

In 2005, there were 58 persons killed and 802 injured in collisions involving truck tractors. This represents a decrease in fatalities and an increase in injuries from 2004. The total number of truck tractors involved in casualty crashes increased in 2005 standing at 646, the five-year high.

*This refers to the total number of people killed and injured in collisions in which a truck tractor was involved. It does not refer to the number of truck tractor drivers killed and injured.

Table 7.9

Improper Actions of Truck Tractor Drivers Involved in Casualty Collisions*

2005

Improper Actions of Truck Tractor Driver	N	%	Driver Actions in Total Casualty Collisions (All Vehicle Types) %
Ran Off Road	93	41.3	14.7
Followed Too Closely	28	12.4	26.1
Stop Sign Violation	19	8.4	8.3
Left Turn Across Path	15	6.7	12.6
Improper Lane Change	12	5.3	2.7
Left of Centre	9	4.0	2.8
Improper Turn	7	3.1	2.2
Disobey Traffic Signal	7	3.1	7.0
Improper Passing	4	1.8	1.1
Backed Unsafely	2	0.9	2.2
Failed to Yield Right of Way - Uncontrolled Intersection	1	0.4	1.8
Other	28	15.6	12.9
Total Number of Drivers	**225**	**100.0**	

Observations

Compared to drivers of other vehicles, truck tractor drivers were more likely to run off the road or make an improper lane change. However, operators of truck tractors were less likely than other vehicle operators to follow too closely, make an unsafe left turn, or disobey a traffic signal.

*Based on those cases where driver actions were specified on the collision report form.

Note: There was a total of 529 truck-tractor drivers involved in casualty collisions for which a driver action was specified on the collision report form. 304 were indicated as driving properly at the time of the collision.

Table 7.10

Condition of Truck Tractor Drivers Involved in Casualty Collisions*

2005

Driver Condition	N	%	Driver Condition in Total Casualty Collisions (All Vehicle Types) %
Normal	493	96.1	92.5
Had Been Drinking	2	0.4	2.8
Alcohol Impaired	4	0.8	2.8
Total Alcohol Involvement	**6**	**1.2**	**5.6**
Fatigued/Asleep	11	2.1	0.2
Impaired by Drugs	--	--	1.1
Other	3	0.6	0.7
Total Number of Drivers	**513**	**100.0**	

Observations

The condition of the truck tractor driver was a contributory factor for 3.9% of the drivers involved. Truck tractor drivers were less likely to consume alcohol before the crash than were drivers involved in total casualty collisions (1.2% compared to 5.6%). However, they were more likely to have been fatigued or asleep at the time of the crash.

*Based on those cases where driver condition was specified on the collision report form.

Table 7.11

Vehicle Factors of Truck Tractors Involved in Casualty Collisions*

2005

Vehicle Factors	N	%	Vehicle Factors in Total Casualty Collisions (All Vehicle Types) %
No Apparent Defect	540	97.1	99.2
Tires Failed	4	0.7	0.1
Defective Brakes	3	0.5	0.2
Improper Load/Shift	3	0.5	0.0
Lighting Defect	1	0.2	0.1
Other	5	0.9	0.3
Total Number of Truck Tractors	**556**	**100.0**	

Observations

Vehicle factors were identified for 2.9% of truck tractors in casualty collisions. Vehicle factors were more likely to be present in truck tractor collisions than in total casualty collisions.

*Based on those cases where a vehicle factor was specified on the collision report form. This does not indicate whether or not a mechanical inspection of the collision-involved truck tractor was conducted.

Table 7.12

Casualty Collisions Involving Truck Tractors:

Month of Occurrence

2005

January	85	13.7
February	54	8.7
March	52	8.4
April	43	6.9
May	33	5.3
June	48	7.7
July	38	6.1
August	56	9.0
September	54	8.7
October	44	7.1
November	57	9.2
December	58	9.3
Total Number of Collisions	**622**	**100.0**

Observations

The occurrence of casualty collisions involving truck tractors was highest in the month of January. The lowest number of truck tractor casualty collisions occurred during May.

Special Types of Vehicles

Trains

- In 2005, five people were killed and 28 people were injured in crashes in which a train was involved. The number of casualties involving trains has decreased from 2004.
- The largest number of casualty collisions involving trains occurred in the months of January and February.
- A large percentage of drivers involved in collisions with a train disobeyed a traffic control device.

Table 7.13

Trains Involved in Casualty Collisions

2001-2005

Number of Trains	2005	2004	2003	2002	2001
Fatal	5	2	3	5	6
Non-Fatal Injury	23	21	22	32	25
Total Number of Trains Involved in Casualty Collisions	**28**	**23**	**25**	**37**	**31**
Casualties*					
Number Killed	5	2	3	6	6
Number Injured	28	35	35	38	30
Total Casualties in Collisions Involving Trains	**33**	**37**	**38**	**44**	**36**

Observations

The number of trains involved in casualty collisions increased from 2004. The number of casualties resulting from these collisions has decreased.

*This refers to the total number of people killed and injured in collisions involving a train.

Table 7.14

Casualty Collisions Involving Trains:

Month of Occurrence

2005

Month	Fatal Collisions N	%	Non-Fatal Injury Collisions N	%	Total Casualty Collisions N	%
January	--	--	7	30.4	7	25.0
February	1	20.0	5	21.7	6	21.4
March	--	--	1	4.3	1	3.6
April	--	--	3	13.0	3	10.7
May	--	--	2	8.7	2	7.1
June	1	20.0	--	--	1	3.6
July	--	--	--	--	--	--
August	1	20.0	1	4.3	2	7.1
September	--	--	1	4.3	1	3.6
October	1	20.0	--	--	1	3.6
November	1	20.0	1	4.3	2	7.1
December	--	--	2	8.7	2	7.1
Total Number of Collisions	**5**	**100.0**	**23**	**100.0**	**28**	**100.0**

Observations

The largest number of casualty collisions involving trains occurred in the months of January and February.

Table 7.15

Actions of Drivers Involved in Casualty Collisions with Trains*

2005

Driver Actions	Drivers in Fatal Collisions N	%	Drivers in Non-Fatal Injury Collisions N	%	Total Drivers in Casualty Collisions N	%
Driving Properly	--	--	4	20.0	4	18.2
Disobey Traffic Signal	--	--	10	50.0	10	45.5
Stop Sign Violation	--	--	3	15.0	3	13.6
Failed to Yield Right of Way - Uncontrolled Intersection	1	50.0	2	10.0	3	13.6
Yield Sign Violation	1	50.0	--	--	1	4.5
Backed Unsafely	--	--	1	5.0	1	4.5
Total Number of Drivers	**2**	**100.0**	**20**	**100.0**	**22**	**100.0**

Observations

A large percentage of drivers involved in collisions with a train disobeyed a traffic control device.

*Based on those cases where driver actions were specified on the collision report form.

Pedestrians

- Pedestrian casualty collisions were more likely to occur from September to December. February and July experienced the least number of pedestrian crashes.
- Pedestrian casualty collisions were most likely to occur on Friday and least likely to occur on Sunday.
- Pedestrian casualty collisions were most likely to occur during the evening rush-hour period (3:00-6:59 p.m.).
- 39.6% of the drivers in collisions involving a pedestrian were recorded as failing to yield the right of way to the pedestrian.
- The casualty rate per population was highest for pedestrians between the ages of 15 and 19.
- Of pedestrians involved in injury collisions, 13.6% had consumed alcohol before the collision, compared to 29.7% involved in fatal collisions.
- Of those pedestrians who had consumed alcohol prior to the collision, the highest rate of involvement per 10,000 population was for pedestrians 20-24 years of age.

Table 8.1

Casualty Collisions Involving Pedestrians:

Month of Occurrence

2005

Month of Collision	N	%
January	87	7.0
February	79	6.4
March	98	7.9
April	86	7.0
May	91	7.4
June	105	8.5
July	79	6.4
August	95	7.7
September	125	10.1
October	133	10.8
November	127	10.3
December	129	10.4
Unspecified	1	0.1
Total Number of Collisions	**1235**	**100.0**

Observations

Pedestrian casualty collisions were more likely to occur from September to December. February and July experienced the least number of pedestrian crashes.

Table 8.2

Casualty Collisions Involving Pedestrians:

Day of Week

2005

Day of Week	N	%
Monday	143	11.6
Tuesday	201	16.3
Wednesday	195	15.8
Thursday	205	16.6
Friday	228	18.5
Saturday	141	11.4
Sunday	121	9.8
Unspecified	1	0.1
Total Number of Collisions	**1235**	**100.0**

Observations

Pedestrian casualty collisions were most likely to occur on Friday and least likely to occur on Sunday.

Table 8.3

Casualty Collisions Involving Pedestrians:

Time Period

2005

Time Period	N	%
11:00 p.m. - 2:59 a.m.	110	8.9
3:00 a.m. - 6:59 a.m.	64	5.2
7:00 a.m. - 10:59 a.m.	227	18.4
11:00 a.m. - 2:59 p.m.	259	21.0
3:00 p.m. - 6:59 p.m.	365	29.6
7:00 p.m. - 10:59 p.m.	198	16.0
Unspecified	12	1.0
Total Number of Collisions	**1235**	**100.0**

Observations

Pedestrian casualty collisions were most likely to occur during the evening rush-hour period from 3:00 p.m. to 6:59 p.m. These collisions were least likely to occur during the early morning hours (3:00 a.m. to 6:59 a.m.).

Table 8.4

Casualty Collisions Involving Pedestrians:

Location

2005

Location	N	%
Urban	1177	95.3
Rural	58	4.7
Total Number of Collisions	**1235**	**100.0**

Observations

The majority of pedestrian casualty collisions (95.3%) occurred in urban areas. Only 4.7% occurred in rural areas.

Table 8.5

Actions of Drivers Involved in Casualty Collisions with Pedestrians*

2005

Driver Actions	N	%
Driving Properly	370	37.0
Failed to Yield Right of Way To Pedestrian	396	39.6
Backed Unsafely	94	9.4
Left Turn Across Path	15	1.5
Ran Off Road	15	1.5
Disobey Traffic Signal	14	1.4
Stop Sign Violation	12	1.2
Improper Turn	12	1.2
Followed Too Closely	5	0.5
Failed to Yield Right of Way - Uncontrolled Intersection	4	0.4
Left of Centre	4	0.4
Yield Sign Violation	2	0.2
Improper Passing	1	0.1
Other	57	5.7
Total Number of Drivers	**1001**	**100.0**

Observations

37.0% of the drivers involved in pedestrian crashes were recorded as driving properly. However, 39.6% of the drivers involved in pedestrian casualty collisions failed to yield the right of way to the pedestrian.

*Based on those cases where driver actions were specified on the collision report form.

Table 8.6

Age of Pedestrian Casualties

2005

Age in Years	Pedestrians Killed N	Pedestrians Injured N	Total Pedestrian Casualties N	%	Pedestrian Casualty Rate Per 10,000 Population*
Under 5	1	29	30	2.3	1.5
5 - 9	0	50	50	3.9	2.4
10 - 14	1	111	112	8.6	5.1
15 - 19	2	205	207	16.0	8.8
20 - 24	9	156	165	12.7	6.5
25 - 29	3	94	97	7.5	3.8
30 - 34	3	83	86	6.6	3.6
35 - 44	5	150	155	12.0	3.0
45 - 54	14	147	161	12.4	3.3
55 - 64	3	73	76	5.9	2.5
65 and over	8	124	132	10.2	3.9
Unspecified	--	25	25	1.9	
Total Number of Pedestrian Casualties	**49**	**1247**	**1296**	**100.0**	

Observations

The casualty rate per population was highest for pedestrians between the ages of 15 and 19. The lowest casualty rate was recorded for children under 5 years of age.

*Source: Based on estimates of the Alberta population by age groups and sex, July 1, 2005, Statistics Canada

Figure 7

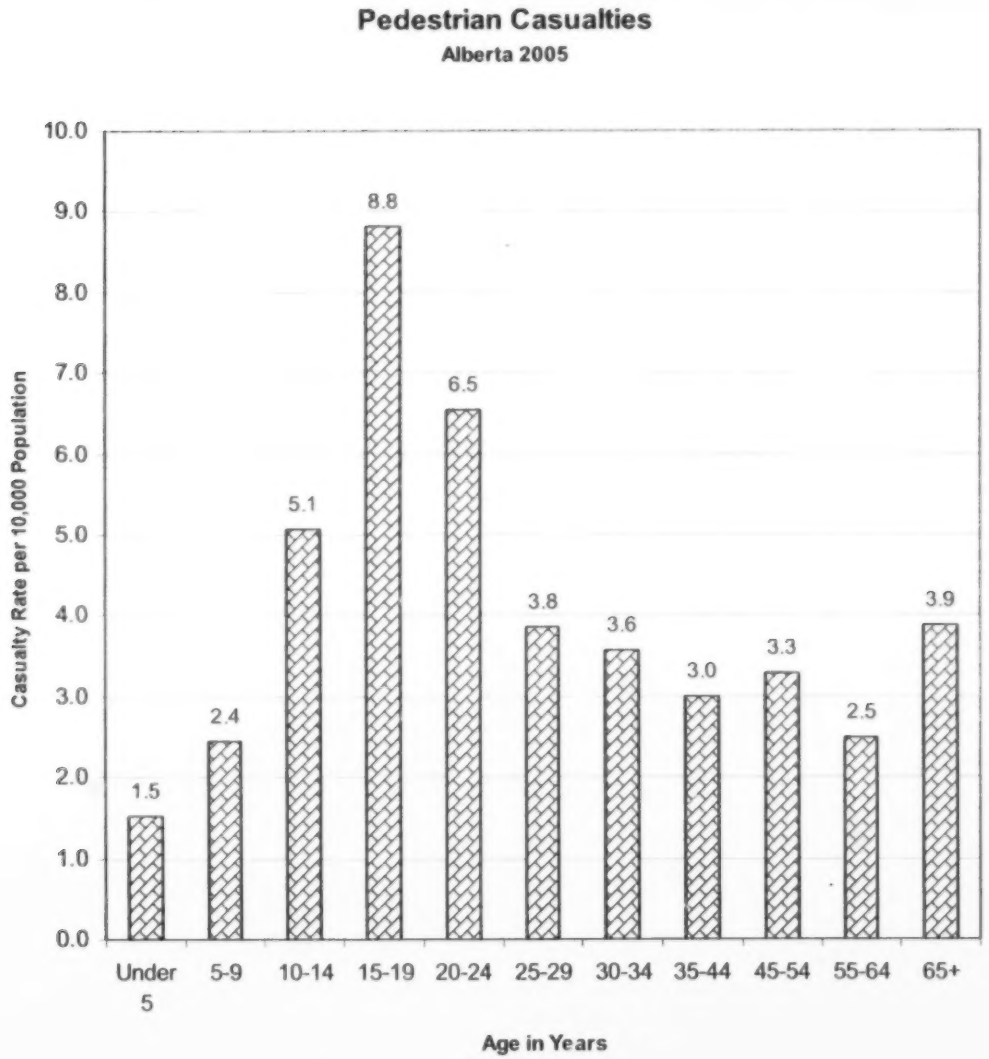

Pedestrian Casualties
Alberta 2005
Casualty Rate per 10,000 Population
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
1.5
2.4
5.1
8.8
6.5
3.8
3.6
3.0
3.3
2.5
3.9
Under 5
5-9
10-14
15-19
20-24
25-29
30-34
35-44
45-54
55-64
65+
Age in Years

Table 8.7

Condition of Pedestrians Involved in Casualty Collisions*

2005

Condition of Pedestrian	Pedestrians in Fatal Collisions N	%	Pedestrians in Non-Fatal Injury Collisions N	%	Total Pedestrians in Casualty Collisions N	%
Normal	23	62.2	835	84.8	858	84.0
Had Been Drinking	7	18.9	66	6.7	73	7.1
Alcohol Impaired	4	10.8	68	6.9	72	7.0
Total Alcohol Involvement	**11**	**29.7**	**134**	**13.6**	**145**	**14.2**
Impaired by Drugs	1	2.7	6	0.6	7	0.7
Other	2	5.4	10	1.0	12	1.2
Total Number of Pedestrians	**37**	**100.0**	**985**	**100.0**	**1022**	**100.0**

Observations

Of pedestrians involved in injury collisions, 13.6% had consumed alcohol before the collision, compared to 29.7% involved in fatal collisions. As the severity of the collision increased, the involvement of alcohol increased dramatically.

*Based only on those cases where pedestrian condition was specified on the collision report form.

Table 8.8

Age of Drinking Pedestrians Involved in Casualty Collisions*

2005

Age in Years	N	%	Rate per 10,000 Population**
Under 10	--	--	--
10 - 14	1	0.7	0.0
15 - 19	27	18.6	1.1
20 - 24	41	28.3	1.6
25 - 29	17	11.7	0.7
30 - 34	10	6.9	0.4
35 - 44	23	15.9	0.4
45 - 54	14	9.7	0.3
55 - 64	6	4.1	0.2
65 and over	--	--	--
Unspecified	6	4.1	
Total Number of Pedestrian Casualties	**145**	**100.0**	

Observations

Of those pedestrians who had consumed alcohol prior to the collision, the highest rate of involvement per 10,000 population was for pedestrians 20 - 24 years of age.

* Based on those cases where pedestrian condition was specified on the collision report form.

** Source: Based on estimates of the Alberta population by age groups and sex, July 1, 2005, Statistics Canada.

Bicyclists

- Casualty collisions involving bicycles were more likely to occur in the month of May.
- Weekdays experienced the most casualty collisions involving bicycles. As well, the largest number of these crashes (37.5%) occurred during the evening rush-hour period.
- Young bicyclists, 10-14 years of age, were the group most frequently involved in bicycle casualty crashes.
- Compared to operators of all vehicles in casualty collisions, bicyclists were more likely to fail to yield right-of-way at an uncontrolled intersection or disobey a traffic signal.
- 5.4% of bicyclists involved in casualty collisions had consumed alcohol before the crash.

Table 9.1

Casualty Collisions Involving Bicycles:

Month of Occurrence

2005

Month of Collision	N	%
January	7	1.1
February	10	1.6
March	22	3.5
April	45	7.1
May	95	15.0
June	89	14.0
July	93	14.7
August	87	13.7
September	78	12.3
October	52	8.2
November	33	5.2
December	23	3.6
Total Number of Collisions	**634**	**100.0**

Observations

The majority of casualty crashes involving bicycles occurred during the month of May.

Table 9.2

Casualty Collisions Involving Bicycles:

Day of Week

2005

Day of Week	N	%
Monday	88	13.9
Tuesday	95	15.0
Wednesday	120	18.9
Thursday	113	17.8
Friday	104	16.4
Saturday	60	9.5
Sunday	54	8.5
Total Number of Collisions	**634**	**100.0**

Observations

Casualty collisions involving bicycles were most likely to occur on weekdays.

Table 9.3

Casualty Collisions Involving Bicycles:

Time Period

2005

Time Period	N	%
11:00 p.m. - 2:59 a.m.	21	3.3
3:00 a.m. - 6:59 a.m.	19	3.0
7:00 a.m. - 10:59 a.m.	102	16.1
11:00 a.m. - 2:59 p.m.	127	20.0
3:00 p.m. - 6:59 p.m.	238	37.5
7:00 p.m. - 10:59 p.m.	123	19.4
Unspecified	4	0.6
Total Number of Collisions	**634**	**100.0**

Observations

The largest proportion of casualty crashes (37.5%) involving bicycles occurred during the evening rush-hour period of 3:00 p.m. - 6:59 p.m.

Table 9.4

Age of Bicycle Casualties

2005

Age in Years	Persons Killed N	Persons Killed %	Persons Injured N	Persons Injured %	Total Bicyclist Casualties N	Total Bicyclist Casualties %	Casualty Rate Per 10,000 Population*
Under 5	--	--	6	1.0	6	0.9	0.3
5-9	--	--	35	5.5	35	5.5	1.7
10-14	1	20.0	114	18.1	115	18.1	5.2
15-19	--	--	96	15.2	96	15.1	4.1
20-24	--	--	88	13.9	88	13.8	3.5
25-29	1	20.0	52	8.2	53	8.3	2.1
30-34	--	--	34	5.4	34	5.3	1.4
35-44	1	20.0	89	14.1	90	14.2	1.7
45-54	--	--	60	9.5	60	9.4	1.2
55-64	--	--	32	5.1	32	5.0	1.0
65 and over	2	40.0	10	1.6	12	1.9	0.4
Unspecified	--	--	15	2.4	15	2.4	
Total Casualties	**5**	**100.0**	**631**	**100.0**	**636**	**100.0**	

Observations

Casualty rates per 10,000 population were highest for persons between the ages of 10 and 14. The lowest casualty rates were recorded for children under 5 years of age and adults aged 55 and older.

*Based on estimates of the Alberta population by age groups and sex, July 1, 2005, Statistics Canada

Table 9.5

Improper Actions of Bicyclists Involved in Casualty Collisions

2005

Improper Actions of Bicyclists	N	%	Driver Actions in Total Casualty Collisions (All Vehicle Types) %
Failed to Yield Right of Way - Uncontrolled Intersection	37	12.6	1.8
Disobey Traffic Signal	36	12.3	7.0
Stop Sign Violation	24	8.2	8.3
Left of Centre	14	4.8	2.8
Left Turn Across Path	13	4.4	12.6
Improper Lane Change	8	2.7	2.7
Improper Turn	8	2.7	2.2
Yield Sign Violation	4	1.4	2.0
Improper Passing	4	1.4	1.1
Ran Off Road	3	1.0	14.7
Followed Too Closely	3	1.0	26.1
Failed to Yield Right of Way to Pedestrian	2	0.7	3.5
Other	137	46.8	12.9
Total Number of Bicyclists	**293**	**100.0**	

Observations

Compared to operators of all vehicles in casualty collisions, bicyclists were more likely to fail to yield right-of-way at an uncontrolled intersection or disobey a traffic signal.

*Based on those cases where driver actions were specified on the collision report form.

Note: There was a total of 443 bicyclists involved in casualty collisions for which a driver action was specified on the collision report form. 150 were indicated as driving properly at the time of the collision.

Table 9.6

Condition of Bicyclists Involved in Casualty Collisions*

2005

Condition of Bicyclist	N	%
Normal	485	94.0
Had Been Drinking	17	3.3
Alcohol Impaired	11	2.1
Total Alcohol Involvement	**28**	**5.4**
Impaired by Drugs	2	0.4
Other	1	0.2
Total Number of Bicyclists	**516**	**100.0**

Observations

5.4% of bicyclists involved in casualty collisions had consumed alcohol before the crash.

*Based only on those cases where bicyclist condition was specified on the collision report form.

Traffic Safety Issues

Alcohol Involvement

- A total of 5.3% of drivers involved in injury crashes were judged to have consumed alcohol prior to the crash, compared to 19.2% of drivers involved in fatal collisions. As the severity of the collision increased, the involvement of alcohol dramatically increased.

- In terms of involvement per 1,000 licensed drivers, males between 18 and 24 years of age were most likely to have been drinking before the crash. There were five and a half times as many male drivers as female drivers who had consumed alcohol prior to the collision.

- In 2005, alcohol related casualty crashes were most likely to have occurred in August or November, on Saturday, and between 11:00 p.m. and 2:59 a.m.

- Figure 8 provides a graphic representation of the involvement of drinking drivers in casualty collisions over the past five years, 2001-2005.

Table 10.1

Condition of Drivers in Casualty Collisions*

2005

Condition of Driver	Drivers in Fatal Collisions N	%	Drivers in Non-Fatal Injury Collisions N	%	Total Drivers in Casualty Collisions N	%
Normal	380	76.2	22511	92.8	22891	92.5
Had Been Drinking	48	9.6	635	2.6	683	2.8
Alcohol Impaired	48	9.6	643	2.7	691	2.8
Total Alcohol Involvement	**96**	**19.2**	**1278**	**5.3**	**1374**	**5.6**
Impaired by Drugs	5	1.0	39	0.2	44	0.2
Fatigued/Asleep	15	3.0	253	1.0	268	1.1
Other	3	0.6	169	0.7	172	0.7
Total Number of Drivers	**499**	**100.0**	**24250**	**100.0**	**24749**	**100.0**

Observations

Of drivers involved in injury collisions, 5.3% had consumed alcohol before the crash, compared to 19.2% in fatal collisions. As the severity of the collision increased, the involvement of alcohol dramatically increased. Overall, 5.6% of drivers involved in casualty collisions were judged to have consumed alcohol before the crash.

*Based on those cases where driver condition was specified on the collision report form. These numbers do not include bicyclists (see Table 9.6, page 65).

Figure 8

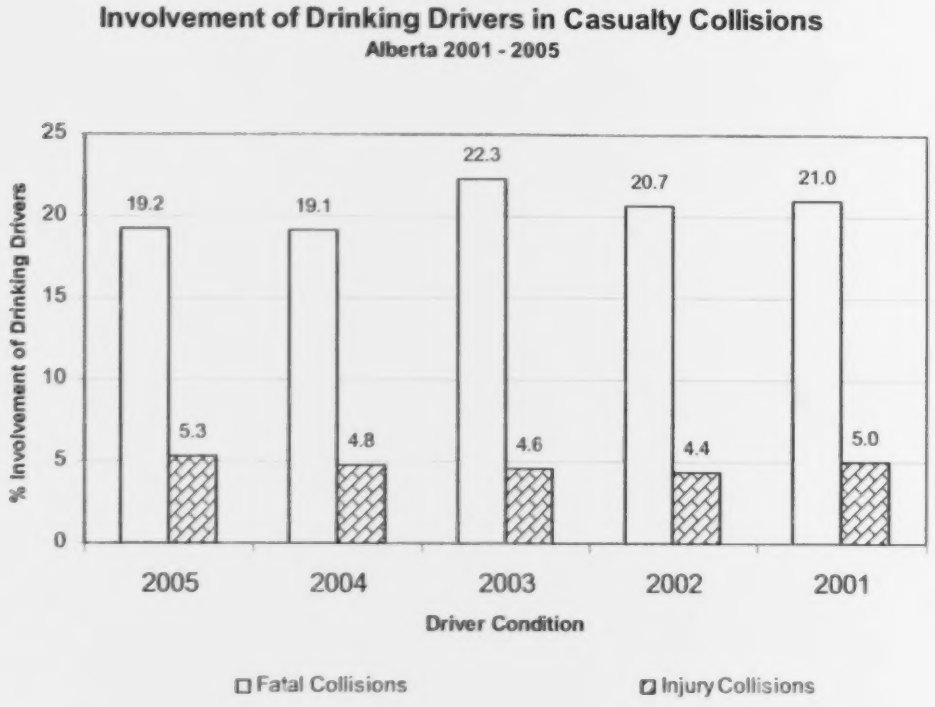

Involvement of Drinking Drivers in Casualty Collisions
Alberta 2001 - 2005
% Involvement of Drinking Drivers
25
20
15
10
5
0
19.2
5.3
19.1
4.8
22.3
4.6
20.7
4.4
21.0
5.0
2005
2004
2003
2002
2001
Driver Condition
Fatal Collisions
Injury Collisions

Figure 9

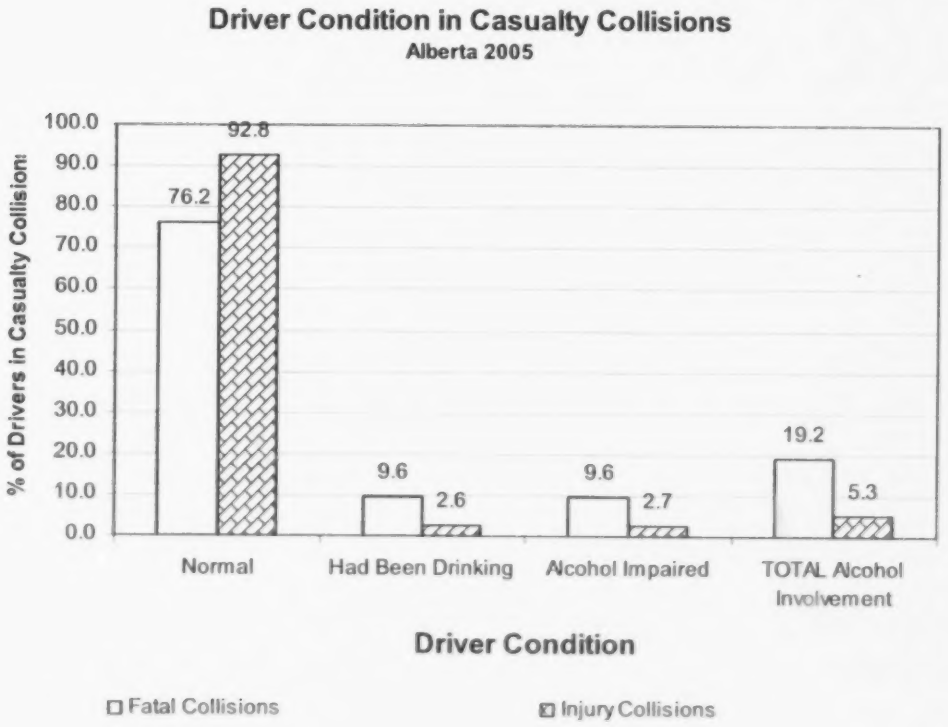

Driver Condition in Casualty Collisions
Alberta 2005
% of Drivers in Casualty Collisions
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
76.2
92.8
9.6
2.6
9.6
2.7
19.2
5.3
Normal
Had Been Drinking
Alcohol Impaired
TOTAL Alcohol Involvement
Driver Condition
Fatal Collisions
Injury Collisions

Table 10.2

Age and Sex of Drinking Drivers in Casualty Collisions*

2005

	Male		Rate Per 1,000** Licensed Drivers	Female		Rate Per 1,000** Licensed Drivers	Total*		Rate Per 1,000** Licensed Drivers
Age in Years	**N**	**%**		**N**	**%**		**N**	**%**	
Under 16	5	0.4	0.4	2	0.1	0.2	7	0.5	0.3
16 - 17	44	3.2	1.4	13	0.9	0.5	57	4.1	1.0
18 - 19	110	8.0	2.7	26	1.9	0.7	136	9.9	1.8
20 - 21	134	9.8	2.9	18	1.3	0.4	152	11.1	1.8
22 - 24	170	12.4	2.2	18	1.3	0.3	188	13.7	1.3
25 - 29	148	10.8	1.1	24	1.7	0.2	172	12.5	0.7
30 - 34	124	9.0	1.0	24	1.7	0.2	148	10.8	0.6
35 - 44	200	14.6	0.8	52	3.8	0.2	252	18.3	0.5
45 - 54	134	9.8	0.5	22	1.6	0.1	156	11.4	0.3
55 - 64	41	3.0	0.3	7	0.5	0.0	48	3.5	0.2
65 and over	32	2.3	0.2	2	0.1	0.0	34	2.5	0.1
Unspecified	7	0.5		--	--		24	1.7	
Total Drivers	**1149**	**83.6**		**208**	**15.1**		**1374**	**100.0**	

Observations

Of those collision-involved drivers who had consumed alcohol, there were five and a half times as many male drivers as female drivers. In terms of involvement per 1,000 licensed drivers, males 18-24 years of age were more likely to have consumed alcohol prior to a casualty collision than any other age group.

Drinking drivers include those indicated on the collision report form as having been drinking prior to the crash and those who were alcohol-impaired at the time of the crash. Whether or not the driver was actually charged is not taken into consideration by the collision report form.

*Includes only drivers whose age and/or sex was specified on the collision report form. Total includes drinking drivers whose sex was not specified on the collision report form.

**Source: Government – Registries. Operator Statistics, December 31, 2005.

Figure 10

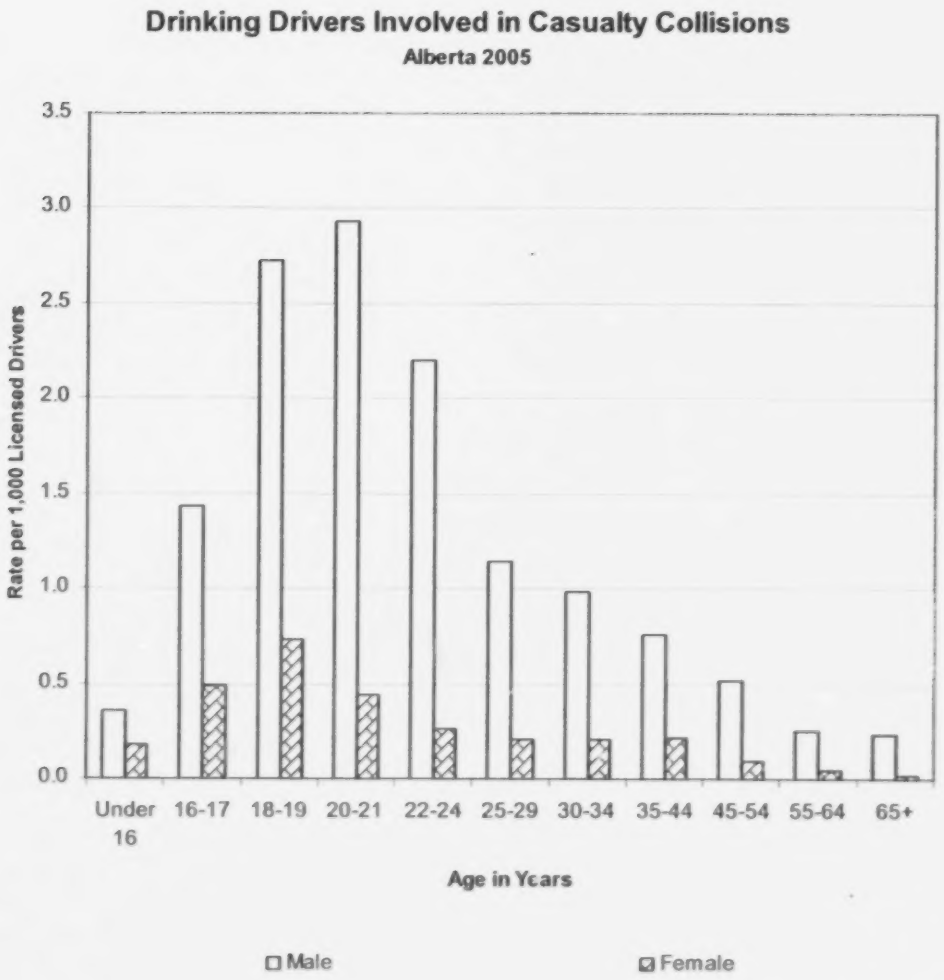

Drinking Drivers Involved in Casualty Collisions
Alberta 2005
Rate per 1,000 Licensed Drivers
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Under 16
16-17
18-19
20-21
22-24
25-29
30-34
35-44
45-54
55-64
65+
Age in Years
Male
Female

Table 10.3

Alcohol-Involved Casualty Collisions:

Month of Occurrence

2005

Month	Fatal Collisions N	%	Non-Fatal Injury Collisions N	%	Total Casualty Collisions N	%
January	3	3.3	84	6.7	87	6.4
February	7	7.6	80	6.4	87	6.4
March	5	5.4	97	7.7	102	7.6
April	5	5.4	97	7.7	102	7.6
May	8	8.7	107	8.5	115	8.5
June	3	3.3	104	8.3	107	7.9
July	13	14.1	114	9.1	127	9.4
August	10	10.9	123	9.8	133	9.9
September	10	10.9	122	9.7	132	9.8
October	8	8.7	99	7.9	107	7.9
November	6	6.5	128	10.2	134	9.9
December	14	15.2	103	8.2	117	8.7
Total Number of Collisions	**92**	**100.0**	**1258**	**100.0**	**1350**	**100.0**

Observations

The months of August and November accounted for the largest proportion of alcohol-involved casualty collisions. The months of January and February accounted for the smallest proportion of alcohol-involved casualty collisions.

Table 10.4

Alcohol-Involved Casualty Collisions:

Day of Week

2005

Day of Week	Fatal Collisions N	Fatal Collisions %	Non-Fatal Injury Collisions N	Non-Fatal Injury Collisions %	Total Casualty Collisions N	Total Casualty Collisions %
Monday	11	12.0	95	7.6	106	7.9
Tuesday	5	5.4	101	8.0	106	7.9
Wednesday	11	12.0	133	10.6	144	10.7
Thursday	14	15.2	154	12.2	168	12.4
Friday	24	26.1	231	18.4	255	18.9
Saturday	20	21.7	308	24.5	328	24.3
Sunday	7	7.6	236	18.8	243	18.0
Total Number of Collisions	**92**	**100.0**	**1258**	**100.0**	**1350**	**100.0**

Observations

The highest number of alcohol-involved fatal collisions occurred on Friday (26.1%) The highest number of non-fatal injury collisions occurred on Saturday (24.5%) The smallest number of alcohol-involved casualty collisions occurred on Monday and Tuesday.

Table 10.5

Alcohol-Involved Casualty Collisions:

Time Period

2005

Time Period	Fatal Collisions N	%	Non-Fatal Injury Collisions N	%	Total Casualty Collisions N	%
11:00 p.m. - 2:59 a.m.	35	38.0	418	33.2	453	33.6
3:00 a.m. - 6:59 a.m.	18	19.6	190	15.1	208	15.4
7:00 a.m. - 10:59 a.m.	3	3.3	62	4.9	65	4.8
11:00 a.m. - 2:59 p.m.	8	8.7	71	5.6	79	5.9
3:00 p.m. - 6:59 p.m.	4	4.3	174	13.8	178	13.2
7:00 p.m. - 10:59 p.m.	20	21.7	310	24.6	330	24.4
Unspecified	4	4.3	33	2.6	37	2.7
Total Number of Collisions	**92**	**100.0**	**1258**	**100.0**	**1350**	**100.0**

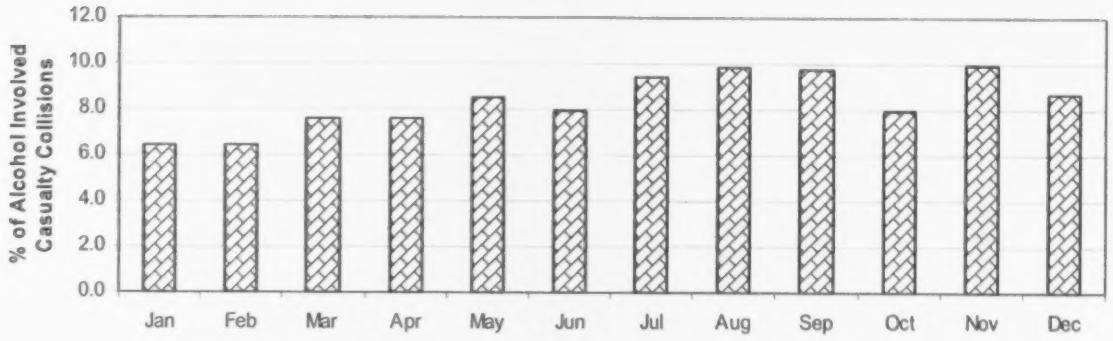
Observations

The late night/early morning time period (11:00 p.m. – 2:59 a.m.) was most likely to record alcohol-involved casualty collisions (33.6%). The morning hours (7:00 a.m. – 10:59 a.m.) were least likely to record alcohol-involved casualty crashes (4.8%).

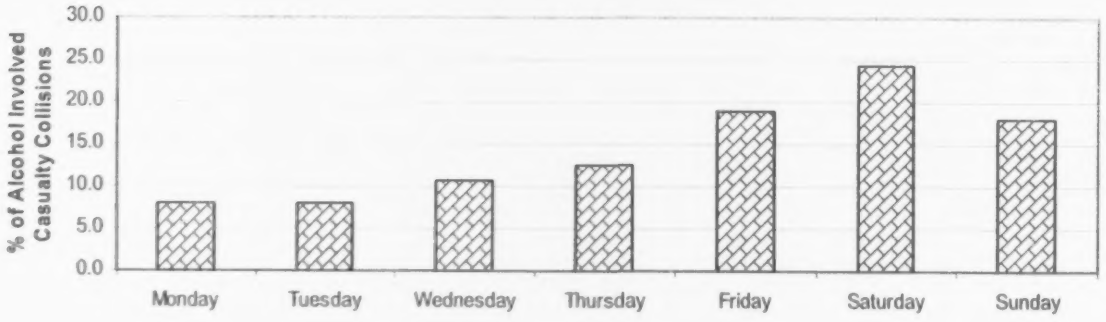
Figure 11

Alcohol-Involved Casualty Collisions
Alberta 2005

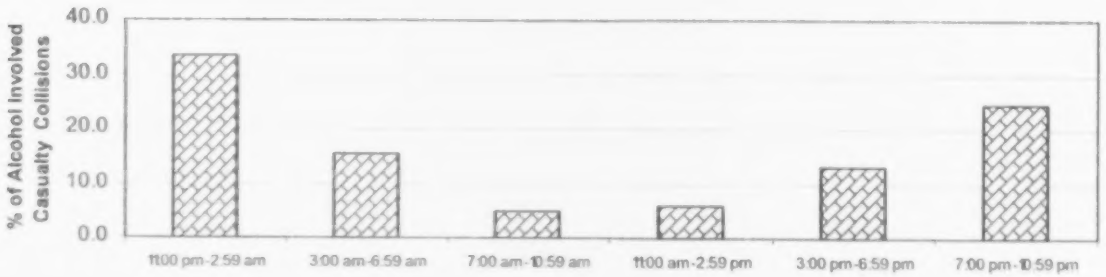
By Month of Occurrence



By Day of Week



By Time Period



Traffic Safety Issues

Restraint Use

- Collision-involved restraint users had a much lower injury rate (10.7%) than those not using restraints (34.7%).
- Non-restraint users were over three times more likely than restraint users to be injured.

Table 10.6

Restraint Use of Vehicle Occupants and Injury Severity* (Use versus Non-Use)

2005

Injury Severity of Occupants	Percentage of Occupants Using Restraints %	Percentage of Occupants Not Using Restraints %
Fatalities	**0.1**	**3.2**
Major Injury	1.0	11.8
Minor Injury	9.7	22.9
Total Occupants Sustaining Injuries	**10.7**	**34.7**
No Apparent Injury	89.2	62.1
Total Occupants	**100.0**	**100.0**

Observations

Collision involved restraint users had a much lower injury rate (10.7%) than those not using restraints (34.7%). Non-restraint users were over three times as likely as restraint users to be injured.

Injury Severity

Fatal – A fatal injury is the death of a person that occurs as a result of a motor vehicle collision within 30 days of the collision.

Major – Persons with injuries or complaint of pain that went to the hospital and were subsequently admitted even if for observation only.

Minor – Persons with injuries or complaint of pain that went to the hospital, were treated in emergency (or refused treatment) and SENT HOME without ever being admitted to the hospital. (Also includes persons who indicated they intend to seek medical attention.)

*Based on those cases where occupant restraint use and injury severity were specified on the collision report form.